

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please add new claims 55-57 as follows:

Listing of Claims:

1-49. (Cancelled)

50. (Previously Presented)

A computer system, comprising:

a data input device;

a data output device;

a processor coupled to the data input and output devices; and

a memory device including a chip package having a plurality of conductors coupled to the processor, the memory device including,

a chip including memory circuitry, the memory circuitry including,

an address decoder coupled to an address bus;

a read/write circuit coupled to a data bus;

a control circuit coupled to a control bus;

a memory-cell array coupled to the address decoder, control circuit, and read/write circuit, the memory-cell array; and

a first converter coupled to the address, data, and control busses, the first converter being operable to receive data signals on the data bus and operable to convert the data signals into corresponding data output electromagnetic waves, and the first converter being operable to receive address, data, and control electromagnetic waves and convert these electromagnetic waves into corresponding electric address, data, and control signals that are applied on the address, data, and control busses, respectively; and

a chip package attached to the chip, the chip package including a second converter that is operable to receive the data output electromagnetic waves from the first converter and operable to convert these received electromagnetic waves into corresponding electric data output signals that are applied to corresponding conductors of the chip package, and

the second converter being operable to receive electric address, data, and control signals on corresponding conductors and operable to convert these electric signals into corresponding address, data, and control electromagnetic waves that are communicated to the first converter of the chip.

51. (Original) The computer system of claim 50 wherein the electromagnetic waves comprise optical electromagnetic signals.

52. (Original) The computer system of claim 50 wherein the electromagnetic waves comprise infrared electromagnetic waves.

53. (Original) The computer system of claim 50 wherein the first and second converters comprise laser diodes.

54. (Original) The computer system of claim 50 wherein the memory device comprises a dynamic random access memory.

55. (New) The computer system of claim 50 wherein the first converter mounted on the chip and the second converter is mounted on the chip package.

56. (New) The microelectronics package of claim 50 wherein the chip includes a first side and the first converter is mounted on the first side, and the chip package includes a first side on which the second converter is positioned, the chip being attached to the chip package with the first side of the chip positioned adjacent the first side of the chip package.

57. (New) The microelectronics package of claim 50 wherein the chip includes a first side and a second side opposing the first side, the first converter being mounted on the first side, and the chip package including a first side on which the second converter is positioned, the chip being attached to the chip package with the second side of the chip positioned adjacent the first side of the chip package.